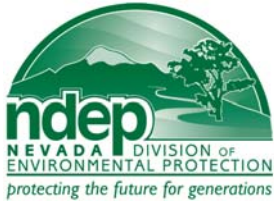


Lesson 5

Potato Chip Dilemma

Reduce

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Teaching Strategies

Potato Chip Dilemma

Reduce

Teaching Strategies

Group Discovery

The group work is effective for all levels of learners.

Whole Group Discussion

Many lead teachers have popsicle sticks with students names on them for “random” selection of students. Use the name sticks to draw names to answer whole group discussion questions.

Small Group Discussion / Shoulder Partners

The small group work is effective for all levels of learners. The discussion of individual answers will allow all students to participate. It will also allow individual students to hear another classmate’s ideas in a more relaxed setting (they will not be afraid of sharing information).

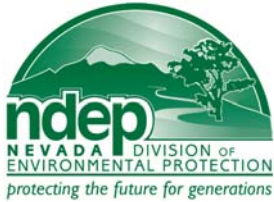
Discussion questions

For below level learners and special ed, the teacher may consider grouping the students together. Read the questions aloud and discuss. Help them put their thoughts on paper.

If there are students without home support, you may want to consider letting the students give you the answers orally or help during lunch/recess/before or after school.

Tip: The student worksheet can be made as a transparency for group discussion.

WARNING—Please check for food allergies before performing this lesson. Adjust the type of chips and or make special arrangements for students that need accommodations.



Lesson Time:
60 minutes

Vocabulary

Packaging

**Secondary
Packaging**

The Potato Chip Dilemma

Reduce

**What can you and your family do
to reduce the waste you produce?**

Objective

Students will understand the importance of reducing waste.
Students will recognize how they can reduce waste.

Materials Needed

30	Workbooks (or handouts)
6	Dry erase markers
1	White board
2	Large measuring bowls
1	Large bag potato chips (20oz)
20	Small bags potato chips (equal weight to the large bag)
1	Roll paper towels
10	Sandwich sized zip-lock baggies
10	Plastic reusable food containers

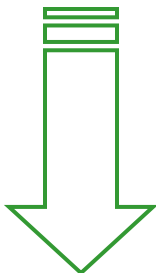
Anticipatory Set

Review the questions assigned for independent practice (from the last lesson) if applicable.

Write the lesson objectives on the white board (or show on overhead).
Discuss with the students what the objectives of the lessons are.

Objective: You will understand the importance of reducing waste.

Objective: You will recognize how you can reduce waste.



Introduction:

“Today I want to talk about waste reduction. If we use fewer materials then less waste will end up in a landfill...”

Modeling / Guided Practice

1. Have the students take out their workbooks (or handouts).
2. Discuss the key vocabulary words for the lesson. Have the students write the definitions on their worksheets.
3. Arrange a table near the front of the class with the measuring bowls and the packages of potato chips on it.
4. Begin by discussing how the potato chips on the table are packaged.
(One large bag vs. 20 small bags and their outside packaging)
5. Have one of the students open and pour out the potato chips from the large bag into one of the measuring bowls.
6. Make a quick measurement (approximate visual) of the volume of chips.
7. Have 20 other students open the small bags and pour contents into the other measuring bowl. Throw the trash in a pile on the floor.
8. Make a quick visual measurement of the volume of chips (approximate).
(The volumes of chips in the 2 bowls should be approximately the same.)
9. Discuss the difference in the amount of packaging used to contain the same volume of chips.
(Stress the visual waste around the table)
10. Pass out the chips to the students...(to destroy the evidence)
Give some of the chips out on paper towels
Give some of the chips out in plastic baggies
Give some of the chips out in reusable containers
11. Discuss the implications of “secondary packaging” and waste reduction.
Can the plastic baggies be reused or recycled?
Can the paper towels be reused or recycled?
Can the reusable containers be reused or recycled?
12. Are there limitations to the reuse of the secondary packaging?
13. How does this affect waste reduction?
14. Allow class time to work on the notebook worksheets.

Modeling / Guided Practice

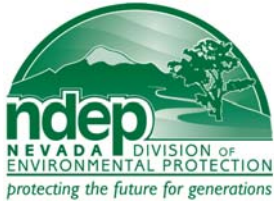
15. Scaffold for support.
16. When the students are done have them share their answers with a shoulder partner.

Closure:

1. Close by summarizing the activity.
2. Emphasize some of the responses that the students gave.
3. Reinforce the importance of reducing waste.

Independent Practice

1. Not applicable for this lesson.



Support Document

VOCABULARY

Potato Chip Dilemma

Reduce

Vocabulary

Packaging: how the items we consume or purchase are put together for sale or use.

Secondary Packaging: the containers that we use for items once they are taken out of the original container.

The concept behind these vocabulary words (and this lesson) is to get students to think about how much waste there is in consumer packaging.

Support Document

Potato Chip Dilemma

Reduce

Discussion Questions:

Can plastic baggies be reused or recycled? (limitations?)

Reuse, with limitations. The bags have a limited lifetime with normal use.

Recycling, no.

Can paper towels be reused or recycled? (limitations?)

Reuse, no. Most people do not reuse paper towels. They are designed for one-time use.

Recycling, no.

Can reusable containers be reused or recycled? (limitations?)

Reuse, yes. Products like Tupperware are a good way to reuse. They can be used over and over again. You can put different products in them if they are washed.

Recycling, no.

Worksheet Questions:

1. The large bag of chips holds the same amount as the total contents of the smaller bags. But which option produces more waste – the single large bag or the combined smaller bags?

We are looking for the amount of waste packaging. In this case, the small bags produce more waste.

2. For waste management, which is preferable? One large bag or many small ones?

Since a large number of small bags produce more waste, for waste management purposes, one large bag is preferable.

3. Knowing that a single large bag takes up less landfill space than many small ones - why might a shopper still select to buy many small bags instead of one large one?

More convenience in lunch box, greater mobility, easier to keep fresh longer, easier to make sure everyone gets the same amount.

4. Come up with a scenario in which one large bag would actually create more waste. (Think outside of the blue box)

Product freshness may be a concern. Chips in the big bag may get stale and unappetizing and get thrown into the trash. Using the smaller bags may actually create less waste.

To bring from the large bag for lunch, a parent may need to buy small disposable baggies in which to put a smaller quantity of chips, thus creating more waste.

NOTE: This could be countered by reuse of the same baggie many times rather than throwing it away.

5. What does it mean when we create less trash? What can you and your family do to reduce the waste that is landfilled?

This is open for discussion. Try to emphasize reduction and reuse. This may also be a good time to introduce recycling.

Your assignment is to come up with a way to bring your lunch to school every day for two weeks. Your lunch should include a sandwich, chips (or pretzels), a drink, a dessert, and a way to clean yourself up (hands and face). Generate as little landfill waste as possible.

Answer: There is no one correct answer. There will be as much variation in responses as you have kids. An example might be: I will use a batman lunchbox. For my sandwich, chips, and cookies, I will use reusable plastic containers (they are rigid, heavy-duty washable containers). For my drink I will use a reusable heavy-duty plastic drink container that is washable. I will also include a cloth napkin that can be laundered.

Visit www.wastefreelunches.com for more info.

Objectives: You will understand the importance of reducing waste.
You will recognize how you can reduce waste.

Vocabulary:

Packaging:

Secondary Packaging:

Please answer the following questions:

1. The large bag of chips holds the same amount as the total contents of the smaller bags. But which option produces more waste – the single large bag or the combined smaller bags?
2. For waste management, which is preferable: One large bag or many small ones?
3. Knowing that a single large bag takes up less landfill space than many small ones - why might a shopper choose to buy many small bags instead of one large one?

4. Come up with a scenario in which one large bag would actually create more waste.
(Think outside of the blue box)

5. What does it mean when we create less trash? What can you and your family do to reduce the waste that must be landfilled.

Why should we reduce the amount of waste we produce?

When you are formulating your answer, please think outside the (blue) box. Remember to apply the concepts of Reduce and Reuse. Be prepared to discuss the assignment during the next class period.

Please write or draw your answer. (You do not actually have to bring your lunch for 2 weeks.)

Your assignment is to:

1. Come up with a way to bring your lunch to school every day for two weeks.

Your lunch should include:

- a sandwich**
- chips (or pretzels)**
- a drink**
- a dessert**
- a way to clean yourself up (hands and face)**

2. Generate as little landfill waste as possible.

Solid Waste and Recycling Curriculum

Lesson 5

Name:_____

Potato Chip Dilemma

Date:_____